



PROCEDURE: 24-Hour Batch Collection

Purpose:

To assess solute clearances over a 24 hour collection period.

Materials Needed:

24-hour drained effluent collection

24-hour urine collection if patient voids 300 ml in a 24-hour period

Lab tubes for effluent and blood samples

Personal Protective Equipment Required:

Gloves, apron, mask and safety glasses or full face shield

STEP	RATIONALE
Patient Instructions:	
On the morning of the test (the day before the clinic visit)	
1. Discard the first morning CAPD exchange (the overnight dwell).	1. The peritoneal cavity must be empty to begin the 24-hour study.
2. Discard first urine. Start collection with next voiding using the urine collection container.	2. The bladder must be empty to begin the 24-hour study.
3. Record the time of the first urine. Collection must be exactly 24 hours. Save all urine thereafter and include the last void at the same time the next day.	3. To document the 24-hour start time and achieve a complete 24-hour collection.
4. Save drained effluent from each exchange. Refrigerate samples.	4. Bacteria consumes urea. Refrigeration will help minimize bacteria level.
5. Bring all bags of effluent and the urine collection container to the dialysis unit.	5. The nurse will prepare the effluent for sampling
In the dialysis unit:	
1. Wash hands. Put on personal protective equipment.	1. To comply with infection control policy.
2. Carefully weigh or measure the amount of drained effluent.	2. Required to determine clearance.



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| 3. Draw an aliquot sample from each CAPD exchange. | 3. Must have a representative sample from each effluent bag based on the size of the bag. |
| 4. Mix the samples collected from each bag in a sterile container. | 4. Refrigerate to minimize bacterial growth in case bacteria was introduced into the system. |

Make certain to wear personal protective equipment during this procedure.

Collect a 10 ml sample of combined effluent to send to the lab for creatinine and urea. Refrigerate sample if not immediately sent to the lab.

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| 5. Measure and record the amount of urine collected and send a 10 ml sample for creatinine and urea. | 5. Total volume and solute results are required to determine 24-hour clearance. |
| 6. Draw blood sample for urea, creatinine, and glucose. | 6. Will be used to calculate clearance. |
| 7. Dispose of remaining effluent according to unit policy. | 7. To comply with infection control policy. |

The procedure is the same for cycling patients except:

The last fill should be drained into a "Y" set. The patient will bring this bag and the drain collection bags from overnight to the clinic. The nurse will weigh the bags and determine the amount of effluent to be drawn as described in step # 3. An aliquot of the "Y" set effluent and an aliquot of the cycling effluent will be drawn and mixed together. A 10 cc sample of the mixed aliquots should be drawn and sent to the lab.

Example: The cycling effluent weight is 15,000 gm. The "Y" set effluent weight is 2400 gm. The cycling aliquot is 150 cc (.01 x 15,000). The "Y" set aliquot is 24 cc (.01 x 2400 gm). Mix the 150 cc and 24 cc then draw a 10 cc sample for the lab.